

ASSIGNMENT 8

Textbook Assignment: "Automotive Chassis and Body" (continued), chapter 8, pages 8-29 through 8-58.

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| <p>8-1. What are the two basic functions of a tire?</p> <ol style="list-style-type: none">1. To support the weight of the vehicle and provide adequate traction2. To act as a cushion between the road and the wheel and provide adequate traction on any road3. To prevent road shock from being felt in the passenger compartment and provide adequate traction.4. To provide a means to control the vehicle and to provide traction <p>8-2. What part of the tire has two steel rings encased in rubber that holds the sidewalls against the rim?</p> <ol style="list-style-type: none">1. Body plies2. Tire bead3. Belts4. Liner <p>8-3. What part of the tire is used to stiffen the tread and strengthen the plies?</p> <ol style="list-style-type: none">1. Tire beads2. Sidewall3. Liner4. Belts <p>8-4. What type of tire has the plies running at an angle from bead to bead?</p> <ol style="list-style-type: none">1. Bias ply2. Radial3. Belted bias4. Belted radial | <p>8-5. What is a major disadvantage of a bias-ply tire?</p> <ol style="list-style-type: none">1. The strength of the plies decrease traction2. It provides a rough ride on smooth roads3. The body of the tire is too rigid4. It increases rolling resistance <p>8-6. In a belted bias tire, what part is added to increase tread stiffness?</p> <ol style="list-style-type: none">1. Stabilizer cord2. Stabilizer ply3. Stabilizer belt4. Stabilizer liner <p>8-7. A radial tire has plies running</p> <ol style="list-style-type: none">1. straight across from bead to bead with stabilizer belts directly beneath the tread2. from the sidewall at different angles than the stabilizer belts3. at an angle from bead to bead with a stabilizer belts between each ply4. straight across from the sidewall with the stabilizer belts at a different angle <p>8-8. What is the major disadvantage of a radial tire?</p> <ol style="list-style-type: none">1. It produces a softer ride at high speeds2. It produces a harder ride at high speeds3. It produces a harder ride at low speeds4. It produces a softer ride at low speed |
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- 8-9. Which of the following types of information will you NOT locate on the sidewall of a tire?
1. Tire size
 2. Mileage range
 3. Treadwear rating
 4. Inflation pressure
- 8-10. What information is presented in a letter-number sequence on the sidewall of a tire?
1. Tire size
 2. Treadwear rating
 3. Speed rating
 4. Load index
- 8-11. A tire has an alphanumeric tire size rating. What does the first number indicate?
1. Temperature rating
 2. Aspect ratio
 3. Load index
 4. Speed rating
- 8-12. A tire has a P-metric tire size-rating system. What does the letter "P" indicate?
1. Pneumatic
 2. Ply rating
 3. Passenger
 4. Performance
- 8-13. The comparison of the height of the tire to the width of the tire is known as
1. section width
 2. aspect ratio
 3. load index
 4. treadwear rating
- 8-14. What factors determine how much of a load a tire can safely carry?
1. Load range and speed index
 2. Load index and aspect ratio
 3. Load range and the grade of the tire
 4. Load index and proper inflation pressure
- 8-15. For every 10 degrees Fahrenheit change in ambient temperature, the inflation pressure of a tire will change by
1. 1 psi
 2. 2 psi
 3. 3 psi
 4. 4 psi
- 8-16. What government agency requires each tire manufacturer to grade its tires under the Uniform Tire Quality Grade (UTQG) labeling system?
1. National Transportation Safety Board (NTSB)
 2. Department of Highway and Motor Vehicle Safety (HMVS)
 3. Department of Transportation (DOT)
 4. Federal Highway Administration (FHA)

8-17. When you are comparing tires of the same brand, what rating factor provides the most accurate information?

1. Load rating
2. Temperature resistance rating
3. Traction rating
4. Treadwear rating

8-18. In 1997, what traction rating was introduced to indicate a greater wet braking traction?

1. A
2. A+
3. AA
4. AAA

8-19. What temperature resistance grade is the minimum level of performance for all passenger vehicle tires?

1. B
2. D
3. A
4. C

8-20. Uniform Tire Quality Grade (UTQG) ratings are not required for light truck and commercial tires.

1. True
2. False

8-21. For easy identification, a butyl type synthetic rubber tube has a stripe on it that is what color?

1. Green
2. Blue
3. Red
4. White

8-22. Of the following wheel designs, which one is NOT a common design?

1. Flat
2. Drop center
3. Semidrop center
4. Split

8-23. What is the most common type of wheel used on passenger vehicles?

1. Semidrop center
2. Split
3. Safety
4. Drop center

8-24. A lug nut has the letter "M" stamped into it, what does the "M" indicate?

1. Military thread
2. Multipurpose thread
3. Metric thread
4. Machine thread

8-25. In a nondriving wheel bearing and hub assembly, what component extends outward from the steering knuckle?

1. Hub
2. Outer drive axle
3. Spindle
4. Bearing support

8-26. In a driving wheel bearing and hub assembly, what component extends through the wheel bearings and is splined to the hub?

1. Spindle
2. Outer drive axle
3. Steering knuckle
4. Axle locknut

8-27. Using a plug to attempt a tire repair without dismounting the tire is effective only what percentage of the time?

1. 50
2. 60
3. 70
4. 80

8-28. You should NOT attempt to repair a tubeless tire that has a puncture that is larger than

1. 1/16 inch
2. 1/8 inch
3. 1/4 inch
4. 1/2 inch

8-29. When removing an object from a tire, you should reduce the air pressure to at least

1. 20 psi
2. 15 psi
3. 10 psi
4. 5 psi

8-30. What are the two methods used to patch an inner tube?

1. Cold-patch and chemical vulcanizing
2. Chemical-vulcanizing and heat shrink
3. Hot-patch and chemical fusion
4. Cold-patch and hot-patch

8-31. How often should tires be rotated?

1. Once a month
2. Once a quarter
3. Yearly
4. 3,000 to 5,000 miles

8-32. Refer to figure 8-41 in the textbook. what pattern is used when you are rotating the tire on a vehicle that has directional tires?

1. E
2. D
3. C
4. A

8-33. What type of tire imbalance will cause the tire to vibrate up and down and from side to side?

1. Static
2. Radius
3. Dynamic
4. Spiral

8-34. A wheel and tire assembly that has its weight evenly distributed around the axis of rotation is known to be in

1. static balance
2. radius balance
3. dynamic balance
4. spiral balance

8-35. If a large amount of weight is required to static balance a wheel and tire assembly, you should distribute the weight in what manner?

1. Add half to the outside and half to the inside
2. Add a quarter to the outside and the rest to the inside
3. Add a quarter to the inside and the rest to the outside
4. Add exactly where needed

8-36. What is the most common type of balancer used by the NCF?

1. Spin balancer
2. On-the-vehicle balancer
3. Bubble balancer
4. Computerized balancer

8-37. Of the following types of tire damage, which one is NOT considered impact damage?

1. Tears
2. Punctures
3. Cuts
4. Splits

8-38. What is the most probable cause for the center of a tire to wear faster than the outer area?

1. Erratic scrubbing against the road
2. Over inflation
3. Excessive camber
4. Faulty ball joints

8-39. What type of tread wear pattern is caused by excessive camber?

1. Feathering
2. Cupping
3. One-side wear
4. Cornering wear

8-40. The vehicle you are driving has a tendency to pull to the left. What is the most probable cause of this problem?

1. Right tire ply separation
2. Under inflated left tire
3. Over inflated left tire
4. Imbalanced right tire

- 8-41. Maximum tire life depends mainly on what factor?
1. Manufacturer
 2. Regular rotation
 3. Proper inflation
 4. Operating conditions
- 8-42. Correct wheel alignment is essential to vehicle safety, handling, extending tire life, and achieving maximum fuel economy.
1. True
 2. False
- 8-43. What type of alignment ensures that the wheels are "squared" to each other?
1. Front-end alignment
 2. Frame alignment
 3. Thrust angle alignment
 4. Steering alignment
- 8-44. Of the following steering angles, which one is NOT a tire wear angle?
1. Caster
 2. Camber
 3. Toe-out on turns
 4. Tracking
- 8-45. As a general rule, vehicles with power steering should have positive caster.
1. True
 2. False
- 8-46. Negative caster tilts the top of the steering knuckle towards the
1. rear of the vehicle
 2. front of the vehicle
 3. right side of the vehicle
 4. left side of the vehicle
- 8-47. Of the following functions, which one is NOT a function of camber?
1. To aid steering by placing vehicle weight on the inner end of the spindle
 2. To prevent tire wear on the inner or outer tread
 3. To load the larger inner wheel bearing
 4. To offset road crown pull
- 8-48. When performing a wheel alignment, you make a slight positive camber setting. As a general rule, the setting you make should be between
1. 1/16 to 1/8 degree
 2. 1/8 to 1/4 degree
 3. 1/4 to 1/2 degree
 4. 1/2 to 3/4 degree

- 8-49. What wheel alignment angle is determined by the difference in the distance between the front and the rear of the left and right wheels?
1. Steering axis inclination
 2. Toe
 3. Tracking
 4. Toe-out on turns
- 8-50. Of the following alignment angles, which one is considered to be the most critical?
1. Caster
 2. Camber
 3. Tracking
 4. Toe
- 8-51. When you are performing a wheel alignment on a front-wheel drive vehicle, what amount of toe-out is required?
1. 1/16 inch
 2. 1/8 inch
 3. 1/4 inch
 4. 1/2 inch
- 8-52. Steering axis inclination is NOT adjustable because it is designed into the suspension of the vehicle.
1. True
 2. False
- 8-53. When performing a wheel alignment, you should take what action to correct the steering axis inclination angle?
1. Adjust the suspension system
 2. Replace damaged or worn suspension components
 3. Change the angle of the steering control arm
 4. Adjust the steering mechanism
- 8-54. You are performing a wheel alignment and discover that the toe-out on turns angle is incorrect. This condition is a good indication that what problem exists?
1. Wrong size tires
 2. Worn ball joints
 3. Misadjusted steering mechanism
 4. Damaged steering components
- 8-55. What steering geometry angle maintains a right angle between the center line of the vehicle and both front and rear axles?
1. Toe-out on turns
 2. Steering axis inclination
 3. Tracking
 4. Caster

8-56. Which of the following conditions will cause improper tracking?

1. Bent rear axle mount
2. Bent control arm
3. Broken shock mount
4. Loose sway bar

8-57. When checking toe-out on turns using a turning radius gauge, you must turn one of the front wheels until the gauge reads

1. 10 degrees
2. 15 degrees
3. 20 degrees
4. 25 degrees

8-58. When performing a front-end alignment, you must align both caster and camber together because one affects the other.

1. True
2. False

8-59. You are making a toe adjustment to the tires of a vehicle. To compare the distance between the front and rear of the tires, you should use what tool?

1. Tape measure
2. Tram gauge
3. Philadelphia rod
4. Tri-square

8-60. You should use what tools to remove surface defects on dolly blocks?

1. Grinder and crocus clothe
2. Rasp and course grit sandpaper
3. File and fine grit sandpaper
4. Sanding block and medium grit sandpaper

8-61. When repairing a damaged vehicle, you force the damaged area to return to a near original shape by using a

1. spoon
2. hammer
3. body straightener
4. portable hydraulic jack

8-62. When using a hammer and dolly to remove a body dent, you should

1. work from the point of impact to the center
2. work the ridge farthest from the point of impact
3. work from the center to the point of impact
4. work the ridge closest to the point of impact

8-63. Body hammers with crowned faces should only be used to make repairs to what type of surfaces?

1. Dimpled
2. Flat
3. Convex
4. Concave

- 8-64. What is the most important factor to be considered before a heavily damaged body panel is repaired?
1. Overall time and labor cost
 2. Damaged area of the body panel
 3. Direction of force that caused the damage
 4. Amount of materials on hand
- 8-65. When welding a new piece of sheet metal on a damaged vehicle, you can ensure a reduction in distortion by
1. using a small torch tip
 2. working from the bottom up
 3. allowing the metal to cool between welds
 4. staggering the welds
- 8-66. You are prepping a vehicle that is in good condition for painting. To remove any scratches, you should use abrasive paper that is what size?
1. 50 grit
 2. 150 grit
 3. 280 grit
 4. 320 grit
- 8-67. What is the preferred method for removing paint from the entire surface of a vehicle?
1. Chemical removal
 2. Sandblasting
 3. Acid bath
 4. Heat guns
- 8-68. What action should be taken to prevent deterioration of exposed sheet metal due to an accident?
1. Refinish the entire vehicle
 2. Refinish the damaged side
 3. Refinish the damaged panel
 4. Spot paint only
- 8-69. When you are refinishing a vehicle, what type of problem will high-viscosity paint create?
1. Runs
 2. Improper flow-out
 3. Orange peel
 4. Poor adherence to the surface
- 8-70. What distance should the spray gun be held from the surface to be painted to obtain optimum coverage?
1. 2 to 6 inches
 2. 4 to 8 inches
 3. 6 to 10 inches
 4. 8 to 12 inches
- 8-71. What is the recommended thickness for a layer of epoxy filler?
1. 1/16 inch
 2. 1/8 inch
 3. 1/4 inch
 4. 3/8 inch

8-72. What publication contains information on the placement of registration numbers on a piece of CESE?

1. NAVFAC P-434
2. NAVFAC P-307
3. NAVFAC P-300
4. NAVFAC P-237

